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ADP010809

TITLE: Acquisition Challenges for Adaptive IT  
Systems

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This paper is part of the following report:

TITLE: 12th Annual NDIA SO/LIC Symposium &  
Exhibition, 12-14 Feb 2001, Arlington VA. NDIA  
Event #1880

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ADP010797 thru ADP010815

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# Acquisition Challenges for Adaptive IT Systems

Presented to  
12th Annual NDIA SO/LIC Symposium  
14 February 2001

by  
James W. Cluck  
Director of Management  
Acquisition and Logistics Center  
U.S. Special Operations Command

# ADAPTIVE SYSTEMS

Systems Which Are Specifically Designed to Perform a Multiple Range Of Tasks With Minimal Reconfiguration by the Operator.

IT Systems Evolving More Adaptive Natures Include:

- Networks
- Receiver/Transmitters
- Antennas
- Sensors

# NETWORKS

Major Focus Areas for Future Adaptability:

- Garrison/Tactical Interop/Interchange-Ability
- IP Addressing Protocols/Addressing
- Dynamic LAN Configurations
- Asymmetric Routing



# RECEIVER/TRANSMITTERS

Future Radios Must Be Radically Different :

- Multi-Band
- Multi-User
- Multi-Functional

# ANTENNAS

Principal Features Must Include:

- Adaptive Impedance Matching
- Dynamic Frequency Tuning
- Balance of Electrical and Physical Characteristics  
With User and Equipment Load

# SENSORS

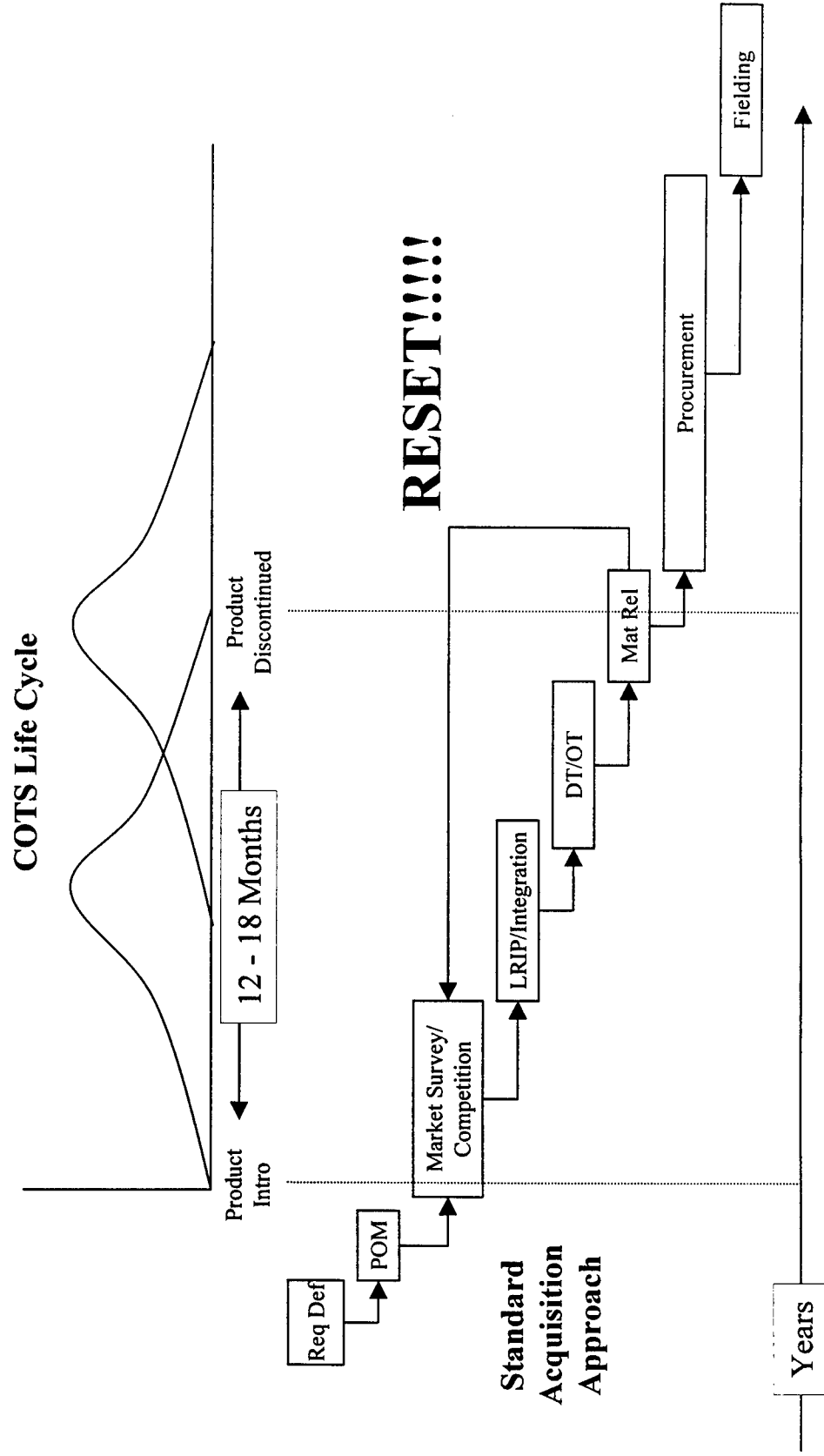
- Self-Organizing
- Local Fusion of Sensor and Communication Information
- Adaptive LPI/LPD Comms
- Cross-Cueing
- Power Control Systems

# ACQUISITION CHALLENGES

- Performance Based Contracts Must Become the Norm
- Government and Industry Must Team on R&D Ventures
- Licensing Schemes Must Balance Multi-Computer Users With Reasonable Protection to the Vendor
- Contracting Must Be Synchronized With Moore's Law

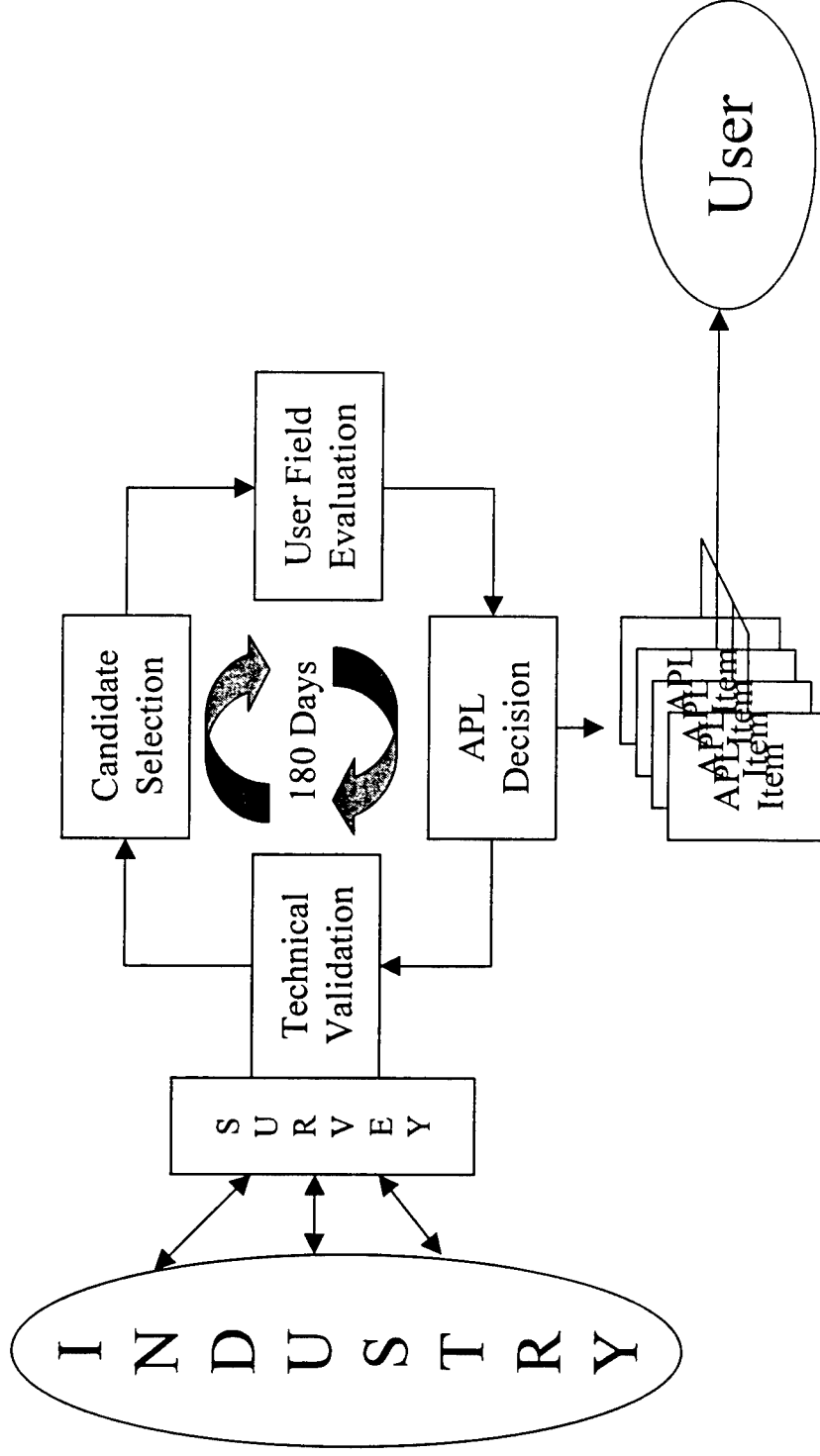


# The IT Acquisition Challenge



# A Modest Proposal

Continuous Process To Keep Pace With Technology



## CHALLENGES (con't)

- SBA Credits Must Balance Prime Contractor and Organizational Goals
- Differentiate Between Seat-Based and Enterprise Licensing
- Infrastructures Dictate Product Loyalties

## CHALLENGES (con't)

- SLA Definitions Must Be Adaptively Tied to Incentive  
Clauses
- Incentive Fees Must Be Tied to Reliability Warranties
- Incentives May Be Term Arrangements or Fees

## CONCLUSION

- Acquisition Practices Are Changing to Keep up With the Rapidly Changing IT Environment.
- Multi-Functional, Reliable Systems Will Be the Only Way for Modernization to Be Affordable.
- Keys to Success Will Be Innovative Gov't-Industry Teams, And Responsive Contracting Mechanisms.



# *Biography*

## *United States Special Operations Command*

*Public Affairs Office      7701 Tampa Point Blvd      MACDILL AFB, FL 33621-5323*  
*(813) 828-4600      Fax: (813) 828-4035*

### **JAMES W. CLUCK**

Mr. James W. Cluck is the Director of Management within the Special Operations Acquisition and Logistics Center, United States Special Operations Command. His current charter is focused on management of the Acquisition Policy, Program Integration, Foreign Comparative Test, Management Operations, and Technical Industrial Liaison Offices. He also represents the Acquisition Executive in various acquisition matters within Headquarters, USSOCOM, and at the Department of Defense level.

Mr. Cluck has over 28 years combined military and Federal service including over seventeen years experience in DoD acquisition. His specific acquisition experience includes both corporate and Government program manager assignments for intelligence and telecommunications programs.

After enlisting in the Marine Corps in 1968, Mr. Cluck served as an aviation photographic-electronics technician with the 1<sup>st</sup> and 2nd Marine Aircraft Wings until 1974 when he entered The Citadel under the Marine Enlisted Commissioning Education Program. Commissioned as an Air Defense Officer in 1976, he subsequently held various Redeye, Improved HAWK and Marine Air Control Group assignments. From 1984 through 1988 Mr. Cluck served as the Systems Engineering Officer and Project Manager for developing Signals Intelligence Systems while assigned to Headquarters, U.S. Marine Corps, Washington, DC and the Marine Corps Research, Development and Acquisition Center, Quantico, VA.

From 1989 through 1991, Mr. Cluck was employed as a senior program manager for a telecommunications firm and was responsible for both business and technical management aspects for several U.S. Army and DoD Agency contracts involving intelligence systems development, production and fielding support.

Since accepting a position at the United States Special Operations Command in 1992, Mr. Cluck has served as the Deputy Program Executive Officer, Intelligence and Information Systems; Program Manager, Intelligence Systems; and Program Manager, C4I Automation Systems. Throughout these assignments, he consolidated diverse intelligence, command and control, and information programs through common migration and technical management techniques to minimize MFP-11 resourcing and enhance interoperability. Mr. Cluck received the USCINCSOC Quality Award in 1997 and the David Packard Award in 1996 for acquisition excellence.

Mr. Cluck graduated from The Citadel in 1976. He also earned a Master's Degree in Telecommunications Systems Management in 1984 from the Naval Postgraduate School, Monterey, California. Mr. Cluck completed the Defense Systems Management College – Program Management Course in 1987 and is designated as a Level III-qualified acquisition professional within the DoD Acquisition Corps.

Mr. Cluck is married to the former Valerie Wetherington of New Bern, North Carolina. They have one married son, Michael.